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ABSTRACT

This study explored how regular teachers (N=20) and special education teachers (N=20) think and make instructional decisions about special needs students. Teachers viewed a videotape of a reading comprehension lesson for a small group of third grade students. One student was a target for observation and classified as learning disabled. Quantitative and qualitative procedures were used to analyze teacher response to two measures, one a structured measure where teachers rated the importance of instructional variables for the student and one an unstructured measure requesting teachers to make instructional recommendations for the student. Findings suggest that regular and special teacher groups may have developed different professional knowledge structures from which to interpret classroom events, identify and solve instructional problems, and collaborate with each other. Six tables and a list of 44 references complete the document. (Author/LL)

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An Exploratory Study of How Regular and Special Education Teachers Think and Make Instructional Decisions About Special Needs Students

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An Exploratory Study of How Regular and Special Education Teachers Think and Make Instructional Decisions About Special Needs Students

Abstract

This study explored how regular and special education teachers think and make instructional decisions about special needs students. Teachers viewed a videotape of a reading comprehension lesson for a small group of third grade students. One student was a target for observation and classified as learning disabled. Quantitative and qualitative procedures were used to analyze teacher responses to two measures, one a structured measure where teachers rated the importance of instructional variables for the student, and one an unstructured measure requesting teachers to make instructional recommendations for the student. Findings suggest that regular and special teacher groups may have developed different professional knowledge structures from which to interpret classroom events, identify and solve instructional problems, and collaborate with each other.

An Exploratory Study of How Regular and Special Education Teachers Think and Make Instructional Decisions About Special Needs Students

Data from federal sources show that large numbers of mildly handicapped students receive part or all of their instruction in regular education classrooms (Office of Special Education Programs, 1991). According to many professionals, however, current mainstreaming efforts are not sufficient, and there is a need to increase the amount of time that these students spend in regular classrooms (Reynolds, Wang, & Walberg, 1987; Will, 1986). Regardless of whether integration for these students increases or decreases, there is the need for regular and special education teachers to communicate and to work collaboratively while serving the needs of students for whom they share responsibility.

The importance of collaboration has been highlighted in the extensive literature on consultation models and prereferral interventions (Graden, 1989; Pugach & Johnson, 1989), the continuing dialogue about the regular education initiative (Jenkins, Pious, & Jewell, 1990), the research on classroom teachers' use and acceptance of instructional practices and arrangements for students with mild handicaps (Johnson & Pugach, 1990; Ysseldyke, Thurlow, Wotruba, & Nania, 1990), and the research examining regular education teacher participation in the IEP process (Smith, 1990). Included in the literature

describing consultation models is the identification of essential communication and collaboration skills (Huefner, 1988; West & Cannon, 1988). Full-time mainstreaming programs, aimed at improving teachers' instruction of mildly handicapped students in regular classrooms, also emphasize the importance of collaboration among classroom teachers and specialists (Bear & Proctor, 1990; Walberg & Wang, 1987).

Even with the current emphasis on communication and collaboration, the extent to which regular and special education teachers collaborate on the instruction of mildly handicapped students is unclear. Some research, for example, reveals that communication between these groups of teachers is infrequent or inadequate (Ammer, 1984; Graham, Burdg, Hudson, & Carpenter, 1980; Haynes & Jenkins, 1986). Moreover, other research points out that special education teachers are unfamiliar with regular education curricula, leading to their inability to discuss specific program needs within regular education contexts (McLoughlin & Kelly, 1982; Pugach & Johnson, 1989).

Studies involving regular teachers reveal that they may lack the skills necessary to implement mainstreaming (Graham, et al., 1980; Huefner, 1988). Regular teachers may also respond to a mystique attached to special education (Huefner, 1988). As an illustration, research has shown that the expertise of specialists, conveyed by technical language unique to the specialty, limits and often controls discussion and negotiation

in meetings about instruction for special students (Mehan, 1983). In other words, by not sharing a common language, specialists and teachers enter settings where one, the specialist, often gains higher status because of the professional language used. This is consistent with current theory on the situated nature of cognition (Brown, Collins, & Duguid, 1989). Knowledge, according to the theory of situated cognition, is indexed to the problems within contexts to which it is connected. Thus, different domains such as special and regular education develop from a process of enculturation that can lead to unique professional orientations exemplified by differences in technical language and activities.

Research has not concentrated on specific factors that might influence or improve communication, or which might help to explain the reasons for a lack of collaboration between regular and special educators. Many comparative studies, for example, have investigated regular and special teachers' expectations of students who are labeled (Foster & Keech, 1977; Wineburg, 1987). Others have explored teachers' perceptions of and tolerance for various types of child behaviors (Ritter, 1989; Safran & Safran, 1987; Safran, Safran, & Barcikowski, 1985), examined how regular and special education teachers treat and interact with low achieving students in their classrooms (Thompson, White, & Morgan, 1982), and examined the similarities and/or differences in special and regular educational

instructional settings (Allington & McGill-Franzen, 1989; Cross, 1989; Haynes & Jenkins, 1986; Morsink, Soar, Soar, & Thomas, 1986). Yet, we know very little about the differences in the knowledge possessed about instruction by regular and special education teachers, and especially how these groups of teachers think about, discuss, and approach instruction for special learners.

Since regular and special teachers are expected to communicate and collaborate about the instructional goals and needs of mildly handicapped students, professionals in special education must do far more than emphasize the importance of communication and collaboration among teachers. It is possible, for example, that regular and special teachers make different decisions about students based on differences in their professional knowledge and how it is accessed, assembled, and reformulated for instructional decision-making. Most important, a greater understanding of these similarities and/or differences might lead to collaborative problem-solving between these teachers. Inquiry in special education, then, needs to be concentrated on current conceptualizations of teaching and teacher thinking and explore classroom contexts. One line of current inquiry focuses on the professional knowledge of teachers and how they organize and use it to interpret classroom events and solve problems (Barnes, 1989; Kennedy, 1991).

The present study grew from interest in teacher knowledge

and in understanding the qualitative differences in how special and regular teachers think about and approach instructional decision making with mildly handicapped students. The major questions addressed by our investigation were: How do regular classroom teachers and special education resource teachers rate the importance of specific instructional factors in helping mildly handicapped students achieve success in the regular classroom? Do regular classroom teachers and special education resource teachers perceive similar or different strengths and needs when they observe mildly handicapped students during instruction? What types of strategies do regular classroom teachers and special education resource teachers recommend for mildly handicapped students to achieve success during instruction in a regular classroom, and what reasons do teachers give for why strategies they identify are important? How do regular classroom teachers and special education resource teachers perceive their roles in implementing the strategies they recommend for instruction with mildly handicapped students?

Method

Materials

Videotape Development. A 12-minute color videotape of a teacher instructing four third grade students, one of whom was learning disabled (LD), in a reading comprehension lesson was developed for the investigation. A reading instruction lesson was selected for this investigation since it was anticipated

that all teachers in the sample would have multiple experiences in teaching reading. The LD student targeted for observation was a nine year old male classified under North Carolina state procedures (Procedures Governing Programs, 1990) as LD. The child's independent reading level was grade one, his appearance was considered normal, and his school records indicated no physical or sensory handicaps. The other students were two males and one female, each nine years of age and reading at or above grade level. The reading lesson was a directed reading activity using the K-W-L (Ogle, 1986) instructional strategy. This strategy is designed to engage students in reading expository material.

Instruments. Two dependent measures were developed for the study. The first, a rating scale, contained 45 items and requested teachers to rate each on a scale of one to four. Thirty-four of the items were instructional factors derived from the current literature on instructional effectiveness (Christenson, Ysseldyke & Thurlow, 1989; Leinhardt & Bickel, 1987; Rosenshine & Stevens, 1984). Teachers rated the importance of instructional factors such as providing extra time for reading instruction in helping the target child to be successful in the regular classroom. Eleven items were drawn from the categories of marker variables developed by Keogh and colleagues (1982). Marker variables were included because we sought to determine how much information teachers would want to

have in the areas that are relevant to the study of LD children, e.g., attention and memory.

The second measure was an open ended, unstructured probe requesting teachers to identify the (1) strengths of the target child during reading instruction, (2) needs of the target child during reading instruction, (3) strategies which they believed would enable the child to be successful in the regular classroom, (4) reasons why strategies were important, and (5) their role in implementing the strategies that they had listed. Strategies were defined as the means/methods to deliver instruction.

Sample

Subjects were 20 regular education teachers and 20 special education resource teachers. The sample was selected by distributing letters and an information sheet to all regular classroom teachers and special education resource teachers (N=796) in grades 2-5 in five school districts in Western North Carolina. Teachers eligible for selection were those who had at least three years of teaching experience, were state certified in their area, and taught only in their areas of certification. The 195 teachers who volunteered to participate in the study were grouped into pools of regular teachers and special education resource teachers. Proportional random sampling was used to select and match teachers in each group according to number of years of teaching experience, current teaching

assignment in either grades 2, 3, 4, or 5, and location in the five school districts.

The regular and special education resource groups each included 19 females and one male, three teachers with four to five years of teaching experience, six with six to 10 years of experience, and 11 with over 10 years of teaching experience. Seven teachers in each group currently taught in grade two, four taught in grade three, five taught in grade four, and four taught in grade five. The number of teachers in each group from each school district was proportional to district size.

Procedure

Teachers from both groups attended one, one-hour session to view the videotape and to complete both measures based on their observations of the target child. Sessions were held after the school day on six occasions in central locations within school districts. The number of teachers attending each session ranged from five to nine. Prior to viewing the videotape, teachers were provided instructions and provided with a copy of the unstructured measure. While viewing the tape, teachers could take notes to use when they responded to the open-ended questions of the unstructured measure. In order to target the child in the videotape, teachers were told the child's name, the color of his shirt, and his location in the group. At no time were teachers told that the target child was classified as learning disabled since we wanted teachers to make decisions

based on the student's behavior and their knowledge rather than on attitudes and beliefs associated with labels. Time to complete the unstructured measure took teachers approximately 30 minutes after viewing the videotape. When teachers completed this measure, they were given the rating scale which took approximately 15 minutes to complete.

Analysis

Data obtained with the unstructured measure were analyzed using procedures designed for the analysis of text-based qualitative data (Spradley, 1979, 1980). The unstructured measure contained five sections to elicit teacher responses (Strengths of the LD Child, Needs of the LD Child, Strategies Perceived to be Useful for the Child, Reasons Why Strategies Were Important, and the Teacher's Role in Implementing Strategies). Each of the sections was analyzed independently and in relation to the others. The first step in the analysis of each section involved identifying categories of teacher responses. For example, the strategies that teachers listed as enabling the LD child to be successful in the regular classroom were sorted into categories in order to compile them according to type, e.g., strategies relating to instruction or to classroom management. To accomplish this step, we implemented the following procedures: (1) investigators determined potential categories and their labels independently, (2) investigators reached consensus on categories and emergent

categories were labeled, (3) investigators and two additional professionals worked independently to assign each teacher response to a category, (4) all five persons discussed their assignments of statements to categories and reached consensus on the category assignments, and (5) categories and accompanying statements were reviewed by the investigators as a final check on consistency of category assignments.

To the extent possible, the same category labels were used across each of the sections of the unstructured task. Two major categories emerged and were applicable across all five sections. One, Curriculum/Instruction, included such subcategories as lesson design (e.g., special approaches), material adaptations (e.g., high interest/low vocabulary books), and grouping (e.g., pairing with a peer). The second, Social/Behavioral, was comprised of subcategories such as promoting self-esteem, reinforcing acceptable behaviors, and dealing with the child's level of activity.

Other categories which emerged were unique to particular sections of the unstructured task and may have applied to one or several of the sections. Three categories, Classroom Management, Assessment and Other, applied to four sections. Cognitive/Intellectual was a category which emerged in only one section, as was the case for another category, Collaboration. Overall, seven categories were developed. Definitions and examples for each category are as follows:

1. Curriculum/Instruction: A response focusing on any aspect of what is taught in classrooms and how content is delivered to students.

   Examples: Lesson formats such as direct instruction, grouping, materials and material adaptation, instructional strategies, attention to academic tasks, feedback about performance.

2. Social/Behavioral: A response focusing on any aspect of the student's behavior and socialization.

   Examples: Attention span or distractibility, activity level, self-concept, disruptive behavior, cooperativeness.

3. Classroom Management: A response focusing on physical and environmental aspects of the classroom setting.

   Examples: Adapting setting to meet needs of child, placement of desk for child, establishing quiet area in classroom, understanding rules and expectations.

4. Assessment: A response focusing on any activity to measure student's physical, academic, or intellectual abilities.

   Examples: Vision test, reading assessment, general screening, speech and language assessment, interest inventory.

5. Cognitive/Intellectual: A response focusing on aspects of the child's cognitive/intellectual development.

   Examples: Average intelligence, smart, bright.

6. Collaboration: A response focusing on communication and

interaction with others.

Examples: Confer with other teachers, contact parents, make a referral (e.g., speech/language specialists).

7. Other: A response that did not fit one of the six categories.

Examples: Medication, physical appearance, physical problems.

In the second step of the analysis, the total number of statements was calculated. Next, the number of statements comprising each category for each teacher group was expressed in terms of percentages of total responses.

Results and Discussion

Comparison Between Groups on the Rating Scale

A t test for independent samples was used to compare the responses of regular and special teacher groups on the instructional items contained in the rating scale. Table 1 presents means, standard deviations, and results of the t test for all items. Results revealed few differences between groups on ratings of the importance of instructional factors or on the 11 categories of marker variables. Four of the 34 instructional factors (provide extra time, place child in small group, base instruction on learning styles, and modify/adapt other content areas) were found to be significant. Only one of the 11 categories of marker variables (i.e., gross motor coordination) was found to be significant.

Insert Table 1 about here

These findings might be expected since, as some research shows (Swanson, 1984), teachers' ratings of the importance of instructional variables may be far higher than their actual use or implementation of these same instructional variables. In addition, there may be a common understanding among regular and special teachers that all instructional variables are important for all children.

Comparison Between Groups on the Unstructured Measure

Teachers' Descriptions of Student Strengths. In the first section of the unstructured measure, teachers were asked to identify the strengths that they perceived the target child to display during the reading lesson they observed. In the analysis of teachers' responses, four major categories of responses emerged: Curriculum/Instruction, Social/Behavioral, Cognitive/Intellectual, and a miscellaneous or Other category. As shown in Table 2, the total number (83) of strengths identified by regular teachers exceeded the total number (77) identified by special education teachers. This finding is surprising since it seems inconsistent with research on teachers' perceptions of problem behaviors which tend to show that regular teachers rate behaviors more severely and are less tolerant than their colleagues in special education (e.g.,

Safran & Safran, 1987).

Insert Table 2 about here

A review of teacher responses within the five major categories revealed differences between the two groups of teachers on how much emphasis each group placed on different categories. Even though the majority of responses from both groups was in two of the four categories, Curriculum/Instruction and Social/Behavioral, the emphasis each group placed on these two categories differed greatly. Half (50.6%) the strengths listed by special educators were related to curriculum and instruction, as compared to 34.9% of the comments of regular educators. In contrast, 41% of regular education teachers' total responses were in the Social/Behavioral category whereas only 31.2% of special education teachers' total responses were in this category. Except for the differences in numbers and percentages, however, the types of responses given in each category were similar. For example, the three most frequent responses by both groups in the Curriculum/Instruction category were: comprehends material, responds appropriately to questions, and has some knowledge of the topic. For the Social/Behavioral category, the three most frequent responses by both groups included, pleasant attitude, cooperative or agreeable, and did not disrupt others.

Unlike the differences found in the first two categories, the groups were similar in the percentage of total responses indicated for the final two categories, Cognitive/Intellectual (16.9% for regular teachers and 13% for special teachers) and Other (7.2% for regular teachers and 5.2% for special teachers). The types of responses provided by both groups were also similar. For Cognitive/Intellectual, for example, responses common to both groups were: average intelligence, smart, and bright. For the Other category, responses were those which could not be categorized in another category and included such things as being "wide awake" and healthy looking.

Teachers' Descriptions of Student Needs. In the section of the unstructured measure on teachers' descriptions of student needs, teachers were asked to identify the needs they perceived the target child to exhibit. In analyzing teachers' responses, four categories emerged: Curriculum/Instruction, Social/Behavioral, Classroom Management, and Assessment.

As can be seen in Table 3, regular teachers generated 90 responses and special education teachers generated 104. An explanation for this finding may be that the early and continuous experiences of special education teachers more often include a focus on the assessment and identification of student needs. Thus, they may be able to generate needs statements more quickly.

Insert Table 3 about here

Similar to their responses for student strengths, both groups of teachers identified the majority of their responses in two categories, Curriculum/Instruction and Social/Behavioral. Again, like the responses for strengths, special education teachers placed much more emphasis on the Curriculum/Instruction category (60.6%) than on the Social/Behavioral category (21.2%). In contrast, the regular education teachers produced the same percentage of responses for the two categories: 43.3% for Curriculum/Instruction and for Social/Behavioral. Interestingly, the percentage of responses by regular teachers in the Social/Behavioral category is twice that of the percentage of responses by special teachers. As with the findings on student strengths, special education teachers focus on curricular and instructional concerns while their counterparts in regular education seem to attend more closely to social and behavioral concerns. This may be an excellent example of how the two groups of teachers' background knowledge influences their identification and interpretation of student problems and needs. Since special education teachers frequently work with students whose behaviors are similar to that of the target child, these teachers may have developed a higher tolerance for behaviors which deviate from those of other

students and not view these behaviors as unique or problematic. Regular educators, on the other hand, may be viewing the child in the context of the regular classroom where behaviors such as those exibited by the target child might be viewed as problematic. Certainly, these findings are consistent with research on teacher tolerance (e.g., Safran & Safran, 1987) and classroom observations indicating that teachers are concerned with maintaining a smooth activity flow and avoiding critical moments which might disrupt instruction (Duffy, 1982; Kounin, 1970).

Although these findings show differences in the emphasis each group places on the categories of Curriculum/Instruction and Social/Behavioral, the types of responses cited most frequently by both groups in the Curriculum/Instruction category did not differ greatly and included: improve reading skills and attend to the task. Except for the most frequently cited responses, however, special education teachers provided a greater number and variety of responses in this category, with eleven subcategories that were not mentioned by regular teachers. These subcategories included: needs help with spelling, provide simple tasks, use visual aids, develop fine motor skills, modify instruction, help him self-monitor, etc.. In contrast, only one subcategory was indicated by regular teachers that was not indicated by special education teachers: needs to be an independent learner. One explanation for this

finding may be that special education teachers have a more elaborate organization of knowledge from which to generate interpretations and problem statements concerning students who present learning problems.

The types of responses cited most often by both groups for the Social/Behavioral category did not differ greatly and focussed on needs related to the child's activity, attention and distraction. Unlike the Curriculum/Instruction category, the only difference between the two groups of teachers was that regular teachers repeated the same responses with greater frequency than did special teachers.

The remaining two categories, Classroom Management and Assessment, received the fewest responses from both groups. For the Assessment category, it should be noted, however, that the special education teachers' percentage of total responses (14.4%) was almost twice that of the percentage of responses (8.9%) from regular teachers. Although the types of responses generated by the two groups were generally similar, four of the special education teachers specifically noted the need to test for Attention Deficit Disorder (ADD) whereas no regular teachers mentioned this terminology.

Strategies Teachers Believe to be Useful for Students. In this section of the Unstructured Task, teachers were requested to identify the instructional strategies that they believed would help the child to be successful in the regular classroom.

In analyzing teachers' responses to the identification of instructional strategies, five categories of responses emerged: Curriculum/Instruction, Social/Behavioral, Classroom Management, Assessment, and a miscellaneous or Other category. As shown in Table 4, the total number (152) of strategies proposed by special teachers exceeded the total number (126) offered by regular education teachers. Although this discrepancy exists in the number of responses generated by the two groups, the types of responses provided within categories by the two groups were strikingly similar and may demonstrate that the two groups possess a similar repertoire of knowledge about instructional strategies. Moreover, regular teachers may possess the background knowledge and expertise to generate strategies which enable a child with learning problems to be successful in the regular classroom.

Insert Table 4 about here

Teacher responses within categories revealed that the largest percentage of total responses for both groups was in the Curriculum/Instruction category. Strategies identified by both groups were focused on grouping, material modification, and lesson design. One strategy cited frequently by both groups is the use of peer assistance or peer tutoring. It appears that both special and regular teachers view peer assistance as a

viable strategy to provide individual attention and assistance for a student with learning problems. This finding is similar to results reported by Shuell, Brown, Watson, and Ewing (1988) in a study of the extent to which teachers consider various instructional methods to be differentially appropriate for different students. Interestingly, neither group provided many responses suggesting individualized attention by the teacher. It is also interesting to note that few teachers suggested providing the target child with basic reading instruction. Rather, the teachers' responses were about material and lesson adaptations instead of teaching reading strategies.

Compared to responses for Strengths and Needs, both groups of teachers produced fewer responses in the Social/Behavioral category. This comparison is especially noteworthy for regular teachers whose responses in the Social/Behavioral category were close to 50% when describing the target student's Needs. Yet, when they were requested to identify strategies, their responses in this category were only 11.1% of their total responses. A review of these teachers' responses in the Classroom Management category may provide an explanation for this finding. As shown in Table 4, 15.1% of regular teachers' responses were in the Classroom Management category. As discussed previously, this may be another example of how teachers' background knowledge influences their views of student needs. In particular, the regular teacher may be

considering the context of the regular classroom where strategies for classroom management would perhaps be more of a concern than individual behavior. This explanation seems even more compelling since the percentage of regular teachers' responses in the Classroom Management category were higher than the percentage of responses (10.5%) produced by special education teachers.

In the Assessment category, regular and special teachers were similar both in the percentage of responses in this category and in the types of responses given. For example, both groups suggested informal assessment more frequently than formal assessment. In addition, teachers from the two groups suggested screening for ADD and indicated a need for tests of the student's vision.

Reasons Given by Teachers for Why Strategies Are Important. As shown in Table 5, special education teachers provided more reasons (153) than regular teachers (114) for why the strategies they identified are important for a student exhibiting learning problems. In addition to the wide gap in the number of responses generated, our analysis of each category revealed that special education teachers provided a greater variety of responses than did the regular education teachers.

Insert Table 5 about here

An examination of the categories of reasons given by the two groups of teachers (Table 5) shows that the percentage of total responses by regular teachers was almost the same for two categories: Curriculum/Instruction (44.7%) and Social/Behavioral (43%). The percentages of responses by special education teachers, however, were twice as much for Curriculum/Instruction (58.8%) as for Social/Behavioral (24.8%). This finding suggests that regular teachers place equal weight on instructional and behavioral conditions for the importance of the strategies they select for a student with learning problems. In contrast, special teachers are more likely to focus on conditions related to curriculum and instruction. When the specific reasons given in each category were analyzed, several findings emerged. In the Social/Behavioral category, one-third of the regular teachers' responses were related to the child's activity level. Most of their remaining responses clustered equally in the areas of self confidence and attention problems. Special education teachers were similar to the regular teacher group in that almost one-third of their responses in this category were related to self confidence. Unlike the regular teachers' responses in this category, however, special education teachers generated many more different reasons, including numerous responses not given by regular teachers, such as motivation, reinforcement, and participation.

In the Curriculum/Instruction category, the most notable differences between the two groups were the varied number of responses generated by the special education teachers compared to the regular education teachers. Regular teachers, for example, gave responses such as experience success, provide alternative activities, attend to task, meet needs, etc.. Although the special education teachers generated all of these same responses, they also gave many responses not mentioned by their counterparts, e.g., organize learning, provide clear steps, develop schema, teach concepts.

Table 5 also shows the responses of the two groups in the categories of Classroom Management, Assessment and Other. In the Classroom Management category, special teachers provided more responses than the regular education teachers who provided few reasons. Responses given by special teachers had to do with how to manage settings and time schedules. In the Assessment category, both groups gave few responses and those that were given were similar. In the Other category, the predominant response for both groups was physical problems. Again, the special teachers noted items not given by the regular teachers, e.g., conferring with others and need for medication.

The findings that special education teachers produced more and a greater variety of responses than regular education teachers seems to show that special education teachers have access to more elaborated knowledge which is indexed to possible

solutions. Although this explanation may seem to be simple at first glance, it is similar to what has been shown in studies of expertise. A number of studies of expert and novice teachers reveal that experts construct more elaborate problem representations as a result of their knowledge base and its organization (Swanson, O'Connor, & Cooney, 1990). Moreover, experts have developed more procedural and conditional understanding in relation to the kinds of decisions they make. Since we might expect special education teachers to possess more expertise about students with learning problems, it is not unexpected to find them providing a greater number and variety of responses than their colleagues in regular education. Moreover, the differences become more evident when teachers are asked to provide reasons for why strategies are important, since this question elicits conditional knowledge.

Teachers' Descriptions of Their Roles in Implementing Strategies. Teachers' descriptions of their roles in implementing instructional strategies revealed a number of findings similar to those discussed in the previous sections. First, special teachers generated a greater number and variety of responses than the regular education group. Second, for both groups, the greatest number of responses was in the areas of encouragement, praising, and positively rewarding behaviors. Third, as shown in Table 6, regular teachers emphasized their role to be greater in the management of Social/Behavioral

behaviors than did the special teachers. In contrast, special education teachers indicated their roles to be predominantly in the areas of curriculum and instruction. Although both groups gave many responses that were similar, e.g., use alternative approaches and monitor instruction, the special education group included numerous responses that were not given by the regular education group. These included such responses as help organize ideas, model strategies, and prompt or cue during instruction.

Insert Table 6 about here

Although these findings are interesting and are consistent with the findings discussed in earlier sections, a category emerged that was not evident in other sections. Both groups of teachers generated responses dealing with conferring, referring and sharing with others. We labeled this category of responses Collaboration and although the percentage of responses for each group was not large (see Table 6), several interesting findings emerged. First, one-half of the regular teachers' responses were to communicate with parents. Few special teachers, however, mentioned parents. Second, most of the remainder of regular teachers' responses were to refer the child to the school nurse. At no time did any of these teachers mention that they would confer with or make a referral to a special education resource person. Likewise, in only two cases did special

education teachers indicate sharing or conferring with regular classroom teachers. Most of these teachers' responses were to confer with other professionals to obtain additional information (e.g., psychologists).

These findings are especially noteworthy since mainstreaming has been emphasized as a goal for learning handicapped students for close to 20 years. Moreover, collaboration among these groups of teachers is viewed by professionals as essential to successful mainstreaming (e.g., Bear & Proctor, 1990). It should be noted, however, that the target student in our study was not labeled. Even so, it might have been expected that one or both groups of these teachers would have considered the need for collaboration with the other.

Conclusions and Future Research Needs

This study grew from an interest in teacher knowledge and in understanding the qualitative differences in how special and regular teachers think about and approach instructional decision making with students who present learning problems. Although data from the rating scale revealed few differences between the groups of teachers, both similarities and differences emerged from the analysis of the unstructured measure. First, the responses of special teachers concentrated on Curriculum/Instructional variables. In contrast, regular teachers' responses were divided between Curriculum/Instructional variables and Social/Behavioral

factors. Likewise, these teachers placed more emphasis on Social/Behavioral variables and Classroom Management. This finding suggests that these groups of teachers may have developed different professional knowledge structures based on teacher preparation and expectations and experiences in different educational settings. Regular teachers, for example, often have 25 or more students in their classrooms and are influenced by external standards emphasizing effective teaching and classroom management practices (Porter, 1989). It could be predicted, then, that these teachers would generate responses about students' behavior, socialization, and the need to implement classroom management strategies. In contrast, the roles of special teachers are to work routinely with students who are experiencing learning problems. In addition, their classroom settings may allow for more expression of behaviors which could be considered disruptive in regular classrooms.

A second major finding to emerge was that special teachers generally provided more responses than regular teachers in most categories of the unstructured measure (i.e., Needs, Strategies, Reasons, Roles). Likewise, these teachers produced a greater variety of responses within some of these same categories (i.e., Needs, Reasons, Roles). We found that the responses of the two groups were similar when they identified student Strengths and the Strategies they would use to provide instruction. They differed, however, when they generated student Needs and when

they gave Reasons for why they would use strategies they had indicated, as well as when they described their Roles in working with the target student. On the one hand, these findings seem to demonstrate that regular and special teachers may identify the same solutions (i.e., Strategies) for teaching students with learning problems. As noted earlier, they seem to possess a similar repertoire of knowledge about instructional strategies. On the other, they do not demonstrate similar knowledge when identifying and interpreting problems (i.e., Needs, Reasons, Roles). It appears that special education teachers may possess a more elaborate organization of knowledge from which to identify and interpret classroom problems. As noted previously, these findings compare to findings in studies of experts and novices.

A third major finding was that neither regular nor special education teachers in our investigation indicated that they would confer with the other. Instead, each group noted that they would confer with other professionals in the school setting. Even though the target student in our study was not labeled, he demonstrated learning problems and it might have been expected that one or both of these groups of teachers would have considered interacting with the other. Since they did not, we might conclude that these regular and special teachers do not engage regularly in collaborative activities.

Understanding how regular and special teachers think about

instruction provides knowledge which will improve our ability to prepare teachers. First, regular and special teachers possess a similar repertoire of instructional strategies (declarative and procedural knowledge) but regular teachers are less able than special teachers to use this knowledge conditionally when teaching special students. As a result, it would seem reasonable to expect teacher preparation programs to provide prospective regular education teachers with clinical experiences involving children with learning problems. Such experiences provide teachers with the opportunity to index their knowledge to problems within contexts to which they are connected. A second implication for teacher preparation would be the development of collaborative models at both preservice and inservice levels. By implementing approaches requiring special and regular teachers to work closely in pairs or small groups, teachers develop shared meaning and understanding of their actions. In other words, they begin to develop a common language which is essential if these teachers are to work collaboratively in school settings.

Although our results raise many questions about teacher thinking and suggest directions for teacher preparation and future research, they should be viewed with caution based on several limitations. First, teachers comprising the subject pool were volunteers and may possess characteristics that separate them from other teachers. Next, the sample was drawn

from small to medium sized school districts. Last, the use of a videotape teaching segment may not depict an accurate classroom context.

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Table 1

Teachers' Ratings of the Importance of Instructional Factors

Instructional Factors	Regular Teachers		Special Teachers			
	Mean	SD	Mean	SD	t	p
Rely on information that is available about the student (such as formal test data, teacher judgments) prior to providing instruction or making recommendations for instruction.	3.00	.65	3.25	.72	-1.16	.225
Rely on your own informal assessments more than formalized test data.	3.55	.61	3.30	.73	1.18	.247
Plan student space/organization to reduce distractions for the student.	3.95	.22	3.95	.22	.00	1.000
Choose "special" methods and materials for instruction rather than using basal readers and other materials typically used in the regular classroom.	3.50	.69	3.70	.57	-1.00	.324
Modify/adapt, if necessary, the basal readers and other materials typically used in the regular classroom.	3.35	.75	3.70	.47	-1.78	.085
Work as a team with other teachers/specialists to obtain additional information.	3.60	.50	3.75	.55	-.90	.374
Provide extra time for this student's reading instruction.	3.05	.83	3.55	.61	-2.18	.036*
Place the child in a small group for reading instruction.	3.45	.83	3.90	.31	-2.28	.031*
Instruct the child one-to-one in reading instruction.	3.35	.81	3.50	.69	-.63	.533
Provide instruction for the student in smaller steps.	3.70	.47	3.90	.31	-1.59	.121
Provide reading materials that will insure a high degree of success for this student.	3.75	.55	4.00	.00	-2.03	.056
Provide opportunities for the student to develop independent learning strategies for reading.	3.45	.69	3.55	.51	-.52	.604
Monitor this student's reading skill development more than you might other students.	3.10	.79	3.40	1.05	-1.02	.313
Provide opportunities for the student to develop problem-solving and critical thinking activities in reading.	3.30	.66	3.25	.72	.23	.819
Use peer tutoring with this student in reading instruction.	3.10	.79	3.10	.85	.00	1.000
Use computer assisted instruction.	3.00	.65	3.00	.73	.00	1.000
Provide instruction based on learning styles.	3.40	.68	3.80	.41	-2.25	.032*
Provide opportunities for the student to engage in cooperative learning activities.	3.35	.59	3.50	.51	-.86	.395
Make high use of teacher directed reading instruction.	3.05	.82	3.95	.89	.37	.714
Focus on the student's prior/background knowledge when providing reading instruction.	3.45	.61	3.35	.49	.57	.569
Provide extensive teacher guided practice in reading skills.	3.00	.86	3.45	.67	-1.83	.075

Provide extensive independent practice in reading skills.	2.40	.94	2.75	.91	-1.20	.239
Use extensive praise and rewards with this student in reading instruction.	3.80	.41	3.65	.49	1.05	.300
Provide opportunities for this student to apply reading skills in differing situations.	3.45	.67	3.55	.61	-.49	.628
Modify/adapt other content areas (e.g., social studies and science) by adapting reading material.	2.95	.76	3.90	.39	-5.19	.000*
Provide instruction on appropriate social behaviors.	3.35	.67	3.45	.89	-.40	.690
Focus on appropriate classroom behaviors.	3.35	.67	3.60	.68	-1.17	.249
Focus on the student's appropriate use of social initiations and responses with peers and teachers.	2.85	.86	3.25	.85	-1.47	.151
Expect the student to complete homework assignments similar to that expected of other students.	1.75	.72	1.70	.57	.24	.809
Obtain support from parents for reinforcing reading activities.	3.90	.31	3.90	.31	.00	1.000
Provide the student with regular feedback on his performance in reading.	3.70	.57	3.90	.31	-1.38	.179
Provide the student with regular feedback on his social performance, such as social responses, cooperation.	3.80	.41	3.80	.41	.00	1.000
General Ability	3.65	.93	3.25	1.21	1.17	.249
Reading Achievement	3.40	.96	3.40	1.23	.00	1.000
Behavioral and Emotional Adjustment	3.60	.94	3.40	1.23	.58	.567
Activity Level	3.45	.95	3.30	1.22	.44	.666
Attention	3.55	.95	3.45	1.23	.29	.775
Auditory Perception	3.50	.95	3.20	1.24	.86	.395
Fine Motor Coordination	3.25	.97	2.85	1.14	1.20	.238

Table 2

Teachers' Descriptions of Student Strengths

Category	% Responses	
	Regular Teachers*	Special Teachers
Curriculum/Instruction	34.9	50.6
Social/Behavioral	41.0	31.2
Cognitive/Intellectual	16.9	13.0
Other	7.2	5.2

NOTE. All scores are percentages and are subject to rounding.

* Total number of responses given by Regular Teachers was 83 and Special Teachers was 77.

Table 3

Teachers' Descriptions of Student Needs

Category	% Responses	
	Regular Teachers*	Special Teachers
Curriculum/Instruction	43.3	60.6
Social/Behavioral	43.3	21.2
Classroom Management	4.4	3.9
Assessment	8.9	14.4

NOTE. All scores are percentages and are subject to rounding.

* Total number of responses given by Regular Teachers was 90 and Special Teachers was 104.

Table 4

Strategies Teachers Believe to be Useful for Students

Category	% Responses	
	Regular Teachers[a]	Special Teachers
Curriculum/Instruction	57.9	63.8
Social/Behavioral	11.1	13.2
Classroom Management	15.1	10.5
Assessment	11.9	12.5
Other	4.0	0

NOTE. All scores are percentages and are subject to rounding.

[a] Total number of responses given by Regular Teachers was 126 and Special Teachers was 152.

Table 5

Reasons Given by Teachers for Why Strategies Are Important

Category	% Responses	
	Regular Teachers*	Special Teachers
Curriculum/Instruction	44.7	58.8
Social/Behavioral	43.0	24.8
Classroom Management	.9	7.2
Assessment	3.5	2.6
Other	7.9	6.5

NOTE. All scores are percentages and are subject to rounding.

* Total number of responses given by Regular Teachers was 114 and Special Teachers was 153.

Table 6

Teachers' Descriptions of Their Roles in Implementing Strategies

Category	% Responses	
	Regular Teachers*	Special Teachers
Curriculum/Instruction	54.3	60.0
Social/Behavioral	30.0	18.0
Classroom Management	5.5	6.0
Assessment	1.6	2.7
Collaboration	8.7	13.1

NOTE. All scores are percentages and are subject to rounding.

* Total number of responses given by Regular Teachers was 127 and Special Teachers was 183.